DRAFT Part 70 Permit
No. 47-065-5345

This Permit Shall Remain in Full Force and Effect
From December xx, 2023, through September 21, 2027

Issued to:

SOFIX LLC
2800 RIVERPORT ROAD
CHATTANOOGA, TENNESSEE 37406-1702

Designated Representative:
Sean Reynolds
Environmental, Health and Safety Manager
Telephone: 423.624.3500 ext. 106

Responsible Official:

Anthony Paolucci
Vice President of Operations

An Application for Renewal Must Be Submitted to the Executive Director of the Chattanooga-Hamilton County Air Pollution Control Bureau No Later Than March 21, 2027

CHATTANOOGA-HAMILTON COUNTY
AIR POLLUTION CONTROL BUREAU
CBL Center II
2034 Hamilton Place Blvd., Suite 300
Chattanooga, Tennessee 37421-6061
Telephone: 423.643.5970

Ronald Drumeller
Executive Director

Prepared by J. Alan Frazier, P.E.

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EMISSION UNIT SUMMARY

The emission units regulated by this permit are the following:

Emission Unit No.	Description
001	Color Former Production Process
002	Product Recovery and Solvent Purification Process
003	Product Handling Process
004	Wastewater Air-Stripping System
005	Cleaver-Brooks Boiler
006	Clarke Emergency Fire-Suppression Pump Engine

CONDITIONS OF GENERAL APPLICABILITY

This permittee, Sofix LLC, is subject to each of the conditions expressed below and is required to comply with them throughout the term of this Part 70 permit. By accepting this permit and operating under it, Sofix agrees to comply with all terms, provisions, limitations, and requirements herein.

Where the term "Chattanooga Air Pollution Control Ordinance" is used in this permit, it means Part II, Chapter 4, of the Chattanooga City Code and any provisions of amendatory ordinances enacted subsequent to the date of the most recent codification of the Chattanooga City Code. ALL SECTIONS OF BOTH THE CHATTANOOGA AIR POLLUTION CONTROL ORDINANCE AND THE CODE OF FEDERAL REGULATIONS CITED IN THIS PERMIT ARE INCORPORATED HEREIN BY REFERENCE. Section numbers referred to in this permit which are not otherwise identified refer to sections in the Chattanooga Air Pollution Control Ordinance.

1.0 **Definitions**. Unless specifically defined within a provision of the Chattanooga Air Pollution Control Ordinance referenced elsewhere in this permit, the definitions in §4-2 and §4-53 shall apply. *§4-2; §4-53*

2.0 **Severability**. If any provision, part of a provision, sentence, clause, or phrase in this permit is for any reason declared to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such decision shall not affect the validity of any other portion of this permit, and only such invalid portion shall be elided. *§4-57(a)(5)*

3.0 **Compliance**.

3.1 The permittee must comply with all conditions of this Part 70 permit. Noncompliance with any permit provision constitutes a violation of either the Chattanooga Air Pollution Control Ordinance; the Tennessee Air Quality Act, T.C.A. 68-201-101 *et seq.*; and/or the federal Clean Air Act, as amended, Title 42 United States Code (U.S.C.) §7401 *et seq.* and is grounds for joint or several enforcement action; for permit termination, revocation, or modification; or for denial of a permit renewal application. Enforcement by the Chattanooga-Hamilton County Air Pollution Control Board (the Board) or the Director of the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau) shall be conducted in accordance with the provisions of §4-4, §4-7, §4-14, §4-15, §4-17, §4-18, §4-20, §4-61, §4-62, §4-63, §4-64, and §4-65, as appropriate to the circumstances. *§4-57(a)(6)(i)*

3.2 It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *§4-57(a)(6)(ii)*

3.3 This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination; or the filing of a notification of planned changes or anticipated noncompliance does not stay any condition in this permit. *§4-57(a)(6)(iii)*

3.4 Annual compliance certifications shall be submitted by **September 21** of each year throughout the term of this permit. Separate compliance certifications shall be submitted to:

Chattanooga-Hamilton County Air Pollution Control Bureau
CBL Center II
2034 Hamilton Place Blvd., Suite 300
Chattanooga, TN 37421-6061

And to:

U.S. EPA Region 4
Air Permits Section
Sam Nunn Atlanta Federal Center
61 Forsyth Street SW, Suite 9T25
Atlanta, GA 30303-8960

Each such compliance certification shall include the following information (provided that the identification of applicable information may cross-reference the permit or previous reports as applicable):

3.4.1 Identification of each term or condition of the permit that is the basis of the certification; *§4-57(c)(5)(iii)(A)*

3.4.2 Compliance status; *§4-57(c)(5)(iii)(C)*

3.4.3 Whether compliance was continuous or intermittent; *§4-57(c)(5)(iii)(B)*

3.4.4 The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with §4-57(a)(3); *§4-57(c)(5)(iii)(B)*

3.4.5 Where any specific emission test method requires quality assurance audit samples and the audit result does not validate the source's sample within the specified parameters, the source must retest until such time as the audit result does validate the sample within the specified parameters; except that the Bureau Director may waive retesting if the source's emission test

sample is in compliance with this permit even if not validated within the specified quality assurance parameters; *§4-3(d)*

3.4.6 Such other facts as the Board or the Bureau Director may require to determine the compliance status of the Part 70 source; and *§4-57(c)(5)(iii)(D)*

3.4.7 Such additional requirements as may be required for enhanced monitoring compliance certification under Title 42 U.S.C. §7414(a)(3) and §7661c(b) of the Clean Air Act. *§4-57(c)(5)(v)*

The annual compliance period that is covered by each compliance certification shall be from **September 1** of the previous year **through August 31** of the current year. *§4-57(c)(5)*

3.5 The methods set forth in §4-3 shall be applicable for determining compliance with all terms, provisions, limitations, and requirements contained in this permit, except where otherwise specifically provided in this permit. *§4-3*

4.0 **Property Rights**. This permit does not convey any property rights of any sort or any exclusive privilege. This permit is not assignable except as provided in §4-58(d)(1)(iv). *§4-57(a)(6)(iv)*

5.0 **Information to be furnished**. The permittee shall furnish to the Bureau Director, within a reasonable period of time, any information that the Board or the Bureau Director may request in writing to determine whether cause exists for modifying, revoking, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board or the Bureau Director copies of records required to be kept by the permit. For information claimed to be confidential, the permittee may furnish such records directly to the Administrator of the U.S. Environmental Protection Agency (EPA) along with a claim of confidentiality. Eligibility for confidential treatment shall be determined by the Board pursuant to the provisions of §4-19 for information submitted directly to the Bureau Director. An independent determination regarding confidentiality would be made by the Administrator of the U.S. EPA for information submitted directly to the Administrator. *§4-57(a)(6)(v)*

6.0 **Fees**. The permittee shall pay fees to the Bureau Director consistent with the fee provisions set forth in §4-60. *§4-57(a)(7)*

7.0 **Changes Provided for by Permit**. No permit revision shall be required under any economic incentives, marketable permits, emissions trading, or similar program or process which is included in the Chattanooga City Code, Part II, Chapter 4, Article III, for changes that are provided for in this permit pursuant to such program or process. *§4-57(a)(8)*

8.0 **Reasonably Anticipated Operating Scenarios**. Contemporaneously with making a change from one operating scenario to another, the permittee must record in a log at the Part 70 source premises a record of the scenarios under which it is operating. *§4-57(a)(9)*

9.0 **Acid Precipitation Requirements**. Where an applicable requirement of the Clean Air Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Clean Air Act and incorporated by reference at §4-52(d), both provisions are herein incorporated into this permit by reference and shall be legally enforceable. This source does not lawfully hold any allowance under Title IV of the Clean Air Act. *§4-57(a)(1)(ii)*

10.0 **Federal Enforceability**. All terms and conditions in this Part 70 permit, including any provisions designed to limit the potential to emit of this Part 70 source, are enforceable by the Administrator of the U.S. EPA and by citizens pursuant to the applicable citizen suit provisions under Section 304 of the Clean Air Act (Title 42 U.S.C. §7604) except for the following, which are locally enforceable only:

10.1 §4-41, Rule 12 (Regulation of Odors in the Ambient Air) and

10.2 §4-41, Rule 14 (Nuisances).

Any terms and conditions included in the permit that are not required under the Clean Air Act or under any of its applicable requirements are specifically designated in this permit as not being federally enforceable under the Clean Air Act. *§4-57(b)*

11.0 **Inspection of Permitted Source(s)**. Upon presentation of identification and in the performance of their duties, the permittee shall allow the Bureau Director and other Bureau employees to perform the following:

11.1 Enter upon the permittee's premises or buildings where a Part 70 source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

11.2 Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

11.3 Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

11.4 Sample or monitor substances or parameters, and collect and preserve evidence for the purpose of assuring compliance with the permit or applicable requirements thereunder at reasonable times and for taking such other actions as are appropriate under the law in accordance with Item 3.1 of these Conditions of General Applicability.

11.5 For the purposes of Items 11.2, 11.3, and 11.4 of these Conditions of General Applicability, "reasonable times" shall be considered to be customary business hours, unless reasonable cause exists to suspect noncompliance with the Chattanooga Air Pollution Control Ordinance or any "applicable requirement," as defined in §4-53, or with any permit issued thereunder, and the Bureau Director specifically authorizes a designee to inspect a facility at any other time.

11.6 In the alternative, the Bureau Director, other Bureau employees, or any other law enforcement officer may obtain a search warrant to obtain, collect, and preserve evidence.

§4-16; §4-57(c)(2)

12.0 **Recordkeeping and Reporting**.

12.1 Record Retention Requirements. All required monitoring data and related support information shall be retained by the permittee for **five (5) years** after the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and logs and copies of all reports required by the permit. *§4-57(a)(3)(ii)(B)*

12.2 Reporting of Emission Limitation Exceedances. The permittee shall promptly notify the Bureau Director **within twenty-four (24) hours** of any **emission limitation exceedance**. A written report shall be submitted to the Bureau Director **within seven (7) days** of the onset of the exceedance. The report shall include the probable cause of the exceedance and any corrective actions or preventive measures that were taken. *§4-57(a)(3)(iii)(B); §4-57(c)(1)*

Any excess emissions that create an **imminent hazard requiring immediate action to protect health or safety** must be **reported by telephone immediately** to the Bureau Director, to the Hamilton County Local Emergency Planning Committee, to the Tennessee Emergency Management Agency, and to the National Response Center. *§4-12(e)(2)*

13.0 **Emergency Provision**. If the Bureau Director or the Administrator of the Chattanooga-Hamilton County Health Department finds that a condition of air pollution exists or is likely to exist, and that it creates any emergency requiring immediate action to protect human health or safety, the mayor with the concurrence of the Bureau Director or the Administrator of the Chattanooga-Hamilton County Health Department shall order persons causing or contributing to the air pollution to reduce or discontinue immediately the emission of air pollutants. Upon issuance of any such order, the Bureau Director shall fix a place and time, not later than twenty-four (24) hours thereafter, for a hearing to be held before the Board. Not more than twenty-four (24) hours after commencement of such

hearing, and without adjournment thereafter, the Board shall affirm, modify, or recommend to the mayor that the order be affirmed, modified, or set aside. *§4-20*

14.0 **Certification**. Any application form, report, or compliance certification submitted pursuant to this permit shall contain a certification, as defined in §4-53, by a responsible official, as defined in §4-53, of truth, accuracy, and completeness. Any certification required by this permit shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. *§4-56(d)*

15.0 **Modifications**.

15.1 Administrative amendments to this permit shall be requested and may be granted in accordance with §4-58(d), and only for the reasons set forth therein. The permittee is required to submit an application for an administrative amendment within sixty (60) days after a change of the name of the permittee is registered with the Tennessee Secretary of State. *§4-58(d)*

15.2 Minor permit modifications to this permit shall be requested and may be granted in accordance with §4-58(e)(1) and (2). *§4-58(e)(1) and (2)*

15.3 Significant permit modifications to this permit shall be requested and may be granted in accordance with §4-58(e)(3). *§4-58(e)(3)*

15.4 Operational flexibility allows changes within this permitted source without requiring a permit revision, if the changes are not modifications under Title I of the Clean Air Act and the changes do not exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions), provided that:

15.4.1 The permittee provides the U.S. EPA and the Bureau Director with written notification at least seven (7) days in advance of the proposed changes; and

15.4.2 For each such change, said written notification shall include a brief description of the change within the permitted source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

The permit shield described in §4-57(f) shall not apply to any change made pursuant to operational flexibility. *§4-58(i)*

15.5 Installation permit application and issuance requirements in §4-8(a) will apply to this permittee and emission units located at this Part 70 source if modifications to or new construction of a Part 70 source are subject to the following:

15.5.1 §4-41, Rule 18 (Prevention of Significant Air Quality Deterioration);

15.5.2 §4-41, Rule 25.3 (General Provisions and Applicability for Volatile Organic Compounds – Standards for New Sources);

15.5.3 §4-41, Rule 23 (General Provisions and Applicability for Process Gaseous Emissions Standards);

15.5.4 Any standard or other requirement pursuant to regulations promulgated under Title 42 U.S.C. §7411 in Title 40 *Code of Federal Regulations* Part 60;

15.5.5 Case-by-case determinations made pursuant to Title 42 U.S.C. §7412(g) and (j) as set forth at §4-53 "Applicable requirements (4)"; or

15.5.6 Case-by-case determinations made pursuant to §4-41, Rule 27 (Particulate Matter Controls for New Sources and New Modifications After August 29, 1995).

§4-50

16.0 **Off-Permit Changes**.

16.1 An off-permit change is one that:

16.1.1 Is not addressed or prohibited by the permit;

16.1.2 is not a modification under Title I of the Clean Air Act;

16.1.3 is not subject to any requirements under Title IV of the Clean Air Act;

16.1.4 Meets all applicable requirements, as described in this permit; and

16.1.5 Does not violate, or cause or contribute to a violation of, any existing permit term or condition.

16.2 A contemporaneous notification shall be submitted to the Bureau Director and to the U.S. EPA except for changes that qualify as insignificant under §4-56(c)(11) and (12).

16.3 The permittee shall keep a record describing off-permit changes made at the Part 70 source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those off-permit changes.

16.4 The permit shield described in §4-57(f) shall not apply to any change made pursuant to off-permit changes.

§4-58(j)

17.0 **Permit Reopening**. This permit shall be reopened and revised under any of the following circumstances, as set forth at §4-58(f)(1):

17.1 Additional applicable requirements become applicable by amendment of the Chattanooga Air Pollution Control Ordinance to this source and the remaining permit term is three (3) or more years. Such reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire;

17.2 Additional requirements (including excess emissions requirements) become applicable to an affected source as defined in §4-53. Upon approval by the Administrator of the U.S. EPA and amendment of the Chattanooga Air Pollution Control Ordinance, excess emissions offset plans shall be incorporated into the permit;

17.3 The Board, the Bureau Director, or the Administrator of the U.S. EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or

17.4 The Board, the Bureau Director, or the Administrator of the U.S. EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

Proceedings to reopen and issue a revised permit shall follow the same procedures as apply to initial permit issuance, described in §4-58, and shall affect only those parts of the permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable, but only after notice of such intent is provided to this permittee by the Bureau Director at least thirty (30) days in advance of the date that permit is to be reopened. A shorter time period may be provided in the case of an emergency. *§4-58(f)*

This permit is also subject to reopening for cause by the U.S. EPA, as described in §4-58(g). *§4-58(g)*

18.0 **Rules Applicable to All Permittee Activities**. The following conditions apply to all activities of this permittee, including insignificant activities:

18.1 Nitrogen Oxides. The permittee shall comply with §4-41, Rules 2.4, 2.5, and 2.7, regarding emissions of nitrogen oxides.

18.2 Visible Emissions. The permittee shall comply with §4-41, Rule 3, which stipulates that the opacity of visible emissions shall not exceed twenty (20) percent for an aggregate of more than five (5) minutes in any one-hour period or more than twenty (20) minutes in any twenty-four-hour period. The permittee shall also comply with §4-41, Rule 9, regarding visible emissions from internal combustion engines. In addition, the permittee shall comply with §4-41, Rule 11, which stipulates that the opacity of visible emissions from the handling, processing, or storage of any material in the open air shall not exceed twenty (20) percent for more than three (3) minutes in any consecutive sixty-minute period or more than twenty (20) minutes in any twenty-four-hour period. *§4-3(c)(9)*

18.3 Certain Fuels. The permittee shall comply with §4-41, Rule 4, regarding importation, sale, transportation, use, or consumption of fuels containing in excess of four (4) percent sulfur by weight.

18.4 Prohibition of Hand-Fired Fuel-Burning Equipment. The permittee shall comply with §4-41, Rule 5, regarding the prohibition of the use of hand-fired fuel-burning equipment with solid fuels.

18.5 Open Burning. The permittee is prohibited from conducting open burning except in accordance with §4-41, Rule 6.

18.6 Fuel-Burning Equipment. The permittee shall comply with §4-41, Rule 8, regarding particulate matter emissions from fuel-burning equipment.

18.7 Process Emissions. The permittee shall comply with §4-41, Rule 10, regarding process particulate matter emissions.

18.8 Odors in Ambient Air. The permittee shall comply with §4-41, Rule 12, regarding emissions of objectionable odors. (*Local rule only*)

18.9 Sulfur Oxides. The permittee shall comply with §4-41, Rule 13, regarding emissions of sulfur oxides.

18.10 Nuisances. The permittee shall comply with §4-41, Rule 14, regarding discharges from any source of air contaminants or other material which shall cause a nuisance. (*Local rule only*)

18.11 Hazardous Air Pollutants. The permittee shall comply with §4-41, Rules 16.1 through 16.4, regarding emission standards for hazardous air pollutants other than asbestos.

18.12 Asbestos – Demolition or Renovation. The permittee shall comply with §4-41, Rules 17.5, 17.10, 17.12, and 17.13, when conducting any demolition or renovation activities at the permitted source.

18.13 Stack Heights. The permittee shall comply with §4-41, Rule 22, regarding good engineering practice stack heights.

18.14 Particulate Matter Controls for New Sources and New Modifications. The permittee shall comply with §4-41, Rule 27, regarding particulate matter controls for any new source or modification for which installation commences after August 29, 1995.

19.0 **Stratospheric Ozone and Climate Protection**. The permittee is subject to the standards for recycling and emissions reduction promulgated at Title 40 *Code of Federal Regulations* Part 82, Subpart F, including the use of certified technicians only. *§4-53*

20.0 **Dismantled Equipment**. The permittee shall report the permanent discontinuance or dismantlement of any equipment or activity covered by this permit to the Bureau Director within thirty (30) days. *§4-11(a)*

21.0 **Monitoring**. All monitoring and related reporting shall be conducted in compliance with §4-57(a)(3). *§4-57(a)(3)*

22.0 **Applicable Requirements**. In addition to the Conditions of General Applicability, Conditions Applicable to the Entire Facility, and Emission Unit Special Conditions in this permit, "applicable requirements" as defined in §4-53 shall apply. *§4-57(a)(1)*

23.0 **Basis of Permit**. This permit is being issued based on the statements made and the information provided in the Part 70 permit application submitted under oath by this source. *§4-56*

CONDITIONS APPLICABLE TO THE ENTIRE FACILITY

1.0 **Semiannual Compliance Monitoring Reports**. In addition to reports that are required by the Conditions of General Applicability, a semiannual compliance monitoring report shall be submitted by **March 21** and **September 21** of each year throughout the term of this permit. The compliance monitoring report shall be submitted to:

Chattanooga-Hamilton County Air Pollution Control Bureau
CBL Center II
2034 Hamilton Place Blvd., Suite 300
Chattanooga, TN 37421-6061

Each such compliance monitoring report shall include the following information:

1.1 The annual **number of batches** that were produced in the color former production process **(Emission Unit 001)** during the preceding **twelve (12) calendar months** (ending on the last day of the reporting period);

1.2 The **volume and calendar date of each withdrawal of toluene** from Virgin Toluene Storage Tank 4210 of the color former production process **(Emission Unit 001)** during the reporting period;

1.3 A summary of monitoring that was performed of applicable valves, pumps, agitators, and connectors of the color former production process **(Emission Unit 001)** and product recovery and solvent purification process **(Emission Unit 002)** to detect leaks in accordance with "National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing," Title 40 *Code of Federal Regulations* Part 63, Subpart FFFF. The summary shall include the following:

1.3.1 The total **number of valves** that were monitored, the number of valves for which leaks were detected, the percentage of valves with detected leaks, and the number of any valves for which detected leaks were not repaired during the reporting period;

1.3.2 The total **number of pumps** that were monitored, the number of pumps for which leaks were detected, the percentage of pumps with detected leaks, and the number of any pumps for which detected leaks were not repaired during the reporting period;

1.3.3 The total **number of agitators** that were monitored, the number of agitators for which leaks were detected, and the number of any agitators for which detected leaks were not repaired during the reporting period; and

1.3.4 The total **number of connectors** that were monitored, the number of connectors for which leaks were detected, the percentage of connectors with detected leaks, and the number of any connectors for which detected leaks were not repaired during the reporting period.

For each component type, the number of any components that were required to be monitored during the reporting period but that were not actually monitored shall be noted. In addition, for any component with a detected leak that was not repaired during the reporting period, it shall be noted if the component was determined to be non-repairable. Furthermore, explanations of why any leak repair was delayed and, where appropriate, of why it was technically infeasible to shut down a process unit to effect any leak repair during the reporting period shall be noted; *§4-41, Rule 16.5(c) [40 CFR 63.182(d)(2) and 63.2480]*

1.4 A summary of information pertaining to the wastewater that was processed in the wastewater air-stripping system **(Emission Unit 004)** that shall include the following:

1.4.1 The total **volume** of wastewater that was processed during the reporting period; and

1.4.2 The **concentration,** in units of parts per million (ppm) or milligrams per liter (mg/l), **of toluene** in each of the **six (6) monthly samples** of wastewater that were collected during the reporting period.

1.5 The annual **number of hours** that the Clarke emergency fire-suppression pump engine **(Emission Unit 006)** was operated during the preceding **twelve (12) calendar months** (ending on the last day of the reporting period); and

1.6 A detailed summary of **emission limitation exceedances** (including those attributable to malfunctions) **and all other deviations from permit requirements** during the reporting period, including every instance in which an emission unit was operated while air pollution control equipment that was required to be used was not in operation, bypassed (by way of a pressure relief valve, blown rupture disk, blown gasket, etc.), or operated outside of a required parameter (e.g., exhaust toluene concentration). For each such incident, the nature and cause of the incident, affected equipment, calendar date, beginning time, elapsed time, and value of any operating parameter that was not met shall be included in the summary. Furthermore, for each incident of an emission limitation exceedance, the estimated resulting emissions shall be included in the summary. *§4-57(a)(3)(iii)(A) ; §4-57(c)(1)*

The six (6)-month reporting period that is covered by each compliance monitoring report that is due on March 21 shall be from **September 1** of the previous year **through February 28 (or 29)** of the current year. The six (6)-month reporting period that is covered by each

compliance monitoring report that is due on September 21 shall be from **March 1 through August 31** of the current year. *§4-57(a)(3)(iii)(A)*

2.0 **Toluene Emission Limitations**. Volatile organic compound (VOC) emissions of toluene from emission sources of the color former production process (Emission Unit 001) and product recovery and solvent purification process (Emission Unit 002) combined are limited as follows:

2.1 Maximum allowable toluene emissions from the combined emission sources that are required to be controlled by the carbon adsorption unit are 2.0 pounds/hour; and

2.2 Fugitive toluene emissions from the valves, pumps, agitators, and connectors combined shall not exceed 16.0 tons during any period of twelve (12) consecutive calendar months.

These emission limitations are best available control technology (BACT), as determined by the Bureau Director. *§4-41, Rule 25.3*

3.0 **Refrigerated Condenser Unit Log**. A log shall be maintained, on the premises, in which the calendar date, beginning time, and elapsed time are recorded that the color former production process (Emission Unit 001) or product recovery and solvent purification process (Emission Unit 002) is operated while the refrigerated condenser unit is *not* in operation. For the purpose of this log, the color former production process is considered to be in operation when any process vessel of the fourth through seventh processing steps, either of the two dryers, or the decanter is being loaded or operated or any of the six toluene storage tanks is being loaded; and the product recovery and solvent purification process is considered to be in operation when any of its process vessels is being loaded or operated. *§4-57(c)(1)*

4.0 **Carbon Adsorption Bed Regeneration**. The **concentration of toluene** in the exhaust of the carbon adsorption unit shall be maintained at less than **50 parts per million (ppm)**, and it shall be continuously monitored and recorded. The active carbon adsorption bed of this unit shall be automatically switched to being regenerated with steam and the inactive regenerated carbon adsorption bed shall be switched to active status whenever a toluene concentration of **45 ppm** is detected in the exhaust for a period of **two (2) consecutive minutes**. The continuous monitor shall be calibrated at regular intervals in accordance with the permittee's calibration procedures. If the continuous monitor becomes inoperative, switching of the carbon adsorption beds may be accomplished manually at appropriate intervals or automatically by using a timer while the monitor is being repaired. These requirements are BACT, as determined by the Bureau Director. *§4-41, Rule 25.3*

5.0 **Alternate Operating Scenario – Solvent Replacement**. Toluene is used as a solvent in the color former production process (Emission Unit 001), and recovered toluene is purified in the product recovery and solvent purification process (Emission Unit 002) so that it can

be reused. Sofix LLC is authorized, as they requested, to operate under an alternate operating scenario in which toluene is replaced by any solvent that is determined by the Bureau to be no more toxic than toluene. In order for a replacement solvent to be determined to be no more toxic than toluene, it must, at a minimum, meet the following criteria:

5.1 A threshold limit value – time weighted average (TLV–TWA) of *not* less than 20 parts per million (ppm) as determined by the American Conference of Governmental Industrial Hygienists (ACGIH);

5.2 *Not* classified by the U.S. EPA as "Human Carcinogen," "Carcinogenic to Humans," "Known/Likely Human Carcinogen," "Probable Human Carcinogen," or "Likely to Be Carcinogenic to Humans" as listed in the Integrated Risk Information System (IRIS); and

5.3 *Not* included in "The List of Extremely Hazardous Substances and Their Threshold Planning Quantities," Title 40 *Code of Federal Regulations* Part 355, Appendices A and B.

At any time throughout the term of this permit that Sofix is operating under the alternate operating scenario, the name of the replacement solvent shall be considered to replace the term "toluene" wherever it appears in this permit. *§4-57(a)(9)*

6.0 **Startup, Shutdown, and Malfunction Plan**. A written startup, shutdown, and malfunction plan for the color former production process (Emission Unit 001) and product recovery and solvent purification process (Emission Unit 002) shall be maintained, on the premises, and complied with in accordance with "General Provisions," Title 40 *Code of Federal Regulations* Part 63, Subpart A, as required by "National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing," Title 40 *Code of Federal Regulations* Part 63, Subpart FFFF. *§4-41, Rule 16.5(c) [40 CFR 63.6(e)(3) and 63.2540]*

7.0. **Air Pollution Control Equipment Replacement**. The addition of air pollution control equipment to achieve additional emissions reductions and/or the replacement of air pollution control equipment with equipment of equal or greater control efficiency for each pollutant controlled by the original equipment are changes that qualify as operational flexibility with the exception that air pollution control technology required by any regulation promulgated pursuant to Section 112 of the Clean Air Act codified at Title 40 *Code of Federal Regulations* Part 63, including control measures employed to demonstrate early reductions of hazardous air pollutants, is not eligible for replacement under operational flexibility. Operational flexibility changes are subject to the notification requirements of Item 15.4 of the Conditions of General Applicability. *§4-58(i)*

8.0 **Air Pollution Control Equipment Maintenance**. Preventative maintenance on each piece of air pollution control equipment at the facility shall be performed at regular intervals in accordance with the permittee's maintenance procedures. This air pollution control equipment consists of a refrigerated condenser unit (Emission Units 001 and 002), a carbon adsorption unit (Emission Units 001 and 002), four baghouses (Emission Units 001 and 003), a scrubber (Emission Unit 001), a cyclone (Emission Unit 003), and a cartridge filter (Emission Unit 003). *§4-57(a)(1)*

EMISSION UNIT SPECIAL CONDITIONS

Emission Unit 001 – Color Former Production Process

1.0 The emission sources of the color former production process are various process vessels of the first, second, and fourth through seventh processing steps; two conical dryers (the eighth processing step); Sulfuric Acid Storage Tank 4523; Virgin Toluene Storage Tank 4210; Toluene Storage Tanks 3211A, 3211B, 3215A, 3215B, and 3215C; and Decanter 3213.

1.1 Volatile organic compound (VOC) emissions of toluene from the process vessels of the fourth through seventh processing steps; two conical dryers; Virgin Toluene Storage Tank 4210; Toluene Storage Tanks 3211A, 3211B, 3215A, 3215B, and 3215C; and Decanter 3213 shall be vented to and controlled by an Edwards SVR-20-DCFR dual refrigerated-condenser unit, whenever it is operational, followed by a Baron-Blakeslee CAH6.6 dual-bed carbon adsorption unit. The refrigerated condenser unit and carbon adsorption unit shall be operated in accordance with the permittee's standard operating procedures. The process vessels of the fourth through seventh processing steps, the two dryers, and the decanter may be loaded or operated and the six toluene storage tanks may be loaded for no more than **40.0 minutes** while the refrigerated condenser unit is not operational **during any calendar day**. None of the process vessels of the fourth through seventh processing steps, the two dryers, or the decanter shall be loaded or operated and none of the six toluene storage tanks shall be loaded either if the refrigerated condenser unit is not in operation, other than for up to 40.0 minutes during any calendar day, or if the carbon adsorption unit is not in operation. [The refrigerated condenser unit and carbon adsorption unit are also used to control VOC emissions of toluene from the product recovery and solvent purification process (Emission Unit 002)]. These requirements are best available control technology (BACT), as determined by the Bureau Director. *§4-41, Rule 16.5(c) (40 CFR 63.2460) and Rule 25.3*

1.2 Particulate matter emissions from the larger conical dryer shall be vented to and controlled by a Jaygo baghouse. Particulate matter emissions from the smaller conical dryer shall be vented to and controlled by a Krauss-Maffei baghouse. Each of these two baghouses is an integral component of the dryer that it serves. The two baghouses shall be operated in accordance with the permittee's standard operating procedures. For each of the two dryers, the dryer shall not be loaded or operated if its baghouse is not in operation. (The exit of each baghouse exhausts to the refrigerated condenser unit followed by the carbon adsorption unit.) These requirements are BACT, as determined by the Bureau Director. *§4-8(e)(2)*

1.3 Sulfuric acid emissions from the process vessels of the first and second processing steps shall be vented to and controlled by a Viron VVS-24-1 scrubber. The scrubber shall be operated in accordance with the permittee's standard operating procedures.

None of the process vessels of the first and second processing steps shall be loaded or operated if the scrubber is not in operation. These requirements are reasonable and proper, as determined by the Bureau Director. *§4-41, Rule 23*

2.0 The color former production process is subject to and the permittee shall comply with "National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing," Title 40 *Code of Federal Regulations* Part 63, Subpart FFFF, which includes the following requirements:

2.1 Applicable valves, pumps, agitators, and connectors shall be periodically monitored to detect leaks of toluene and any detected leak shall be promptly repaired; and *§4-41, Rule 16.5(c) (40 CFR 63.2480)*

2.2 Applicable cooling-water heat exchange systems shall be periodically monitored to detect leaks of toluene into the water and any detected leak shall be promptly repaired. *§4-41, Rule 16.5(c) (40 CFR 63.104 and 63.2490)*

§4-41, Rule 16.5(c) (40 CFR 63.2430–63.2550)

3.0 A log shall be maintained, on the premises, in which the **number of batches** that are produced in the color former production process during each **calendar month** is recorded. *§4-57(c)(1)*

4.0 A log shall be maintained, on the premises, in which the **volume and calendar date of each withdrawal of toluene** from Virgin Toluene Storage Tank 4210 are recorded. *§4-57(c)(1)*

5.0 The maximum allowable emissions of particulate matter from each of the two conical dryers are 0.020 grain per standard cubic foot (gr/scf). The emission limitation for the larger dryer is equivalent to 0.014 pound/hour at the reported baghouse flow rate of 80 standard cubic feet per minute (scfm). The emission limitation for the smaller dryer is equivalent to 0.010 pound/hour at the reported baghouse flow rate of 56 scfm. These emission limitations are BACT, as determined by the Bureau Director. *§4-8(e)(2)*

6.0 The **pH of the scrubbing water** of the scrubber shall be maintained at **no less than 4** whenever any of the process vessels of the first and second processing steps are being loaded or operated, and it shall be read at least once each **calendar week**. In addition, **water flow through the scrubber shall be verified** by observation through a sight glass at least once each **calendar week** while the scrubber is required to be in operation. A log shall be maintained, on the premises, in which the weekly pH readings, the results of the weekly water flow observations, and the calendar date of each reading and of each observation are recorded. These requirements are reasonable and proper, as determined by the Bureau Director. *§4-41, Rule 23; §4-57(c)(1)*

7.0 The maximum allowable emissions of sulfuric acid from the process vessels of the first and second processing steps and from Sulfuric Acid Storage Tank 4523 combined are 0.01 pound/hour. This emission limitation is reasonable and proper, as determined by the Bureau Director. *§4-41, Rule 23*

8.0 Testing of the color former production process, as controlled by the refrigerated condenser unit followed by the carbon adsorption unit, to determine the VOC emissions of toluene may be required by the Bureau Director. If required, this test shall consist of and be performed in accordance with test methods approved by the U.S. EPA and be performed in accordance with §4-3. *§4-3; §4-8(c)(8); §4-57(c)(1)*

Emission Unit 002 – Product Recovery and Solvent Purification Process

1.0 The product recovery and solvent purification process consists of various process vessels. Volatile organic compound (VOC) emissions of toluene from these process vessels shall be vented to and controlled by an Edwards SVR-20-DCFR dual refrigerated-condenser unit, whenever it is operational, followed by a Baron-Blakeslee CAH6.6 dual-bed carbon adsorption unit. The refrigerated condenser unit and carbon adsorption unit shall be operated in accordance with the permittee's standard operating procedures. The process vessels may be loaded or operated for no more than **40.0 minutes** while the refrigerated condenser unit is not operational **during any calendar day**. None of the process vessels shall be loaded or operated either if the refrigerated condenser unit is not in operation, other than for up to 40.0 minutes during any calendar day, or if the carbon adsorption unit is not in operation. [The refrigerated condenser unit and carbon adsorption unit are also used to control VOC emissions of toluene from the color former production process (Emission Unit 001)]. These requirements are best available control technology (BACT), as determined by the Bureau Director. *§4-41, Rule 16.5(c) (40 CFR 63.2460) and Rule 25.3*

2.0 The product recovery and solvent purification process is subject to and the permittee shall comply with "National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing," Title 40 *Code of Federal Regulations* Part 63, Subpart FFFF, which includes the following requirements:

2.1 Applicable valves, pumps, agitators, and connectors shall be periodically monitored to detect leaks of toluene and any detected leak shall be promptly repaired; and *§4-41, Rule 16.5(c) (40 CFR 63.2480)*

2.2 Applicable cooling-water heat exchange systems shall be periodically monitored to detect leaks of toluene into the water and any detected leak shall be promptly repaired. *§4-41, Rule 16.5(c) (40 CFR 63.104 and 63.2490)*

§4-41, Rule 16.5(c) (40 CFR 63.2430–63.2550)

3.0 Testing of the product recovery and solvent purification process, as controlled by the refrigerated condenser unit followed by the carbon adsorption unit, to determine the VOC emissions of toluene may be required by the Bureau Director. If required, this test shall consist of and be performed in accordance with test methods approved by the U.S. EPA and be performed in accordance with §4-3. *§4-3; §4-8(c)(8); §4-57(c)(1)*

Emission Unit 003 – Product Handling Process

1.0 The emission sources of the product handling process are three storage silos, a blending silo, and two filling machines.

1.1 Particulate matter emissions from the three storage silos combined shall be vented to and controlled by a Griffin Environmental CA-19-D baghouse. The baghouse shall be operated in accordance with the permittee's standard operating procedures. None of three storage silos shall be loaded if the baghouse is not in operation.

1.2 Particulate matter emissions from the blending silo shall be vented to and controlled by a Nol-Tec baghouse that is an integral component of the silo. The baghouse shall be operated in accordance with the permittee's standard operating procedures. The blending silo shall neither be loaded nor used for blending if the baghouse is not in operation.

1.3 Particulate matter emissions from the two filling machines combined shall be vented to and controlled by a Tempest cyclone followed by a cartridge filter. The cyclone and filter shall be operated in accordance with the permittee's standard operating procedures. Neither of the two filling machines shall be operated if either the cyclone or the filter is not in operation.

These requirements are best available control technology (BACT), as determined by the Bureau Director. *§4-8(e)(2)*

2.0 The maximum allowable emissions of particulate matter from the three storage silos combined are 0.020 grain per standard cubic foot (gr/scf), which is equivalent to 0.069 pound/hour at the reported exhaust flow rate of 400 standard cubic feet per minute (scfm). This emission limitation is BACT, as determined by the Bureau Director. *§4-8(e)(2)*

3.0 The maximum allowable emissions of particulate matter from the blending silo are 0.020 grain per standard cubic foot (gr/scf), which is equivalent to 0.082 pound/hour at the reported maximum exhaust flow rate of 480 standard cubic feet per minute (scfm). This emission limitation is BACT, as determined by the Bureau Director. *§4-8(e)(2)*

4.0 The maximum allowable emissions of particulate matter from the two filling machines combined are 0.020 grain per standard cubic foot (gr/scf), which is equivalent to 0.034 pound/hour at the reported exhaust flow rate of 200 standard cubic feet per minute (scfm). This emission limitation is BACT, as determined by the Bureau Director. *§4-8(e)(2)*

5.0 Visible emissions from the product handling process shall not exceed ten (10) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours. This limitation is BACT, as determined by the Bureau Director. *§4-8(e)(2)*

6.0 Testing of any emission source of the product handling process, as controlled, to determine the emissions of particulate matter and to determine the opacity of the emissions may be required by the Bureau Director. If required, these tests shall consist of and be performed in accordance with test methods approved by the U.S. EPA and be performed in accordance with §4-3. *§4-3; §4-8(c)(8); §4-57(c)(1)*

Emission Unit 004 – Wastewater Air-Stripping System

1.0 The emission sources of the wastewater air-stripping system are two air-stripping columns in series. The maximum allowable volatile organic compound (VOC) emissions of toluene from the wastewater air-stripping system are 0.90 pound/hour. Compliance with this emission limitation shall be accomplished by adherence to the following limitations:

1.1 The **concentration of toluene** in the wastewater that is to be processed in the wastewater air-stripping system shall not exceed **60 parts per million (ppm)**.

1.2 Wastewater shall be processed in the wastewater air-stripping system at a flow rate of no more than **1,800 gallons/hour**.

These limitations are best available control technology (BACT), as determined by the Bureau Director. *§4-41, Rule 25.3*

2.0 A sample of wastewater shall be collected each **calendar month** from the sampling valve that is located prior to the entrance of the primary air-stripping column, and each such sample shall be analyzed for its **concentration of toluene**. A log shall be maintained, on the premises, in which the calendar date of each monthly sample collection and the results of each sample analysis are recorded. *§4-57(c)(1)*

3.0 A log shall be maintained, on the premises, in which the **volume**, as determined by a flow meter, of wastewater that is processed in the wastewater air-stripping system during each **calendar month** is recorded. The wastewater flow meter shall be calibrated at regular intervals in accordance with the permittee's calibration procedures. *§4-57(c)(1)*

Emission Unit 005 – Cleaver-Brooks Boiler

1.0 Only natural gas may be burned in the Cleaver-Brooks Boiler. (This boiler has a heat input capacity of 12.553×10^6 Btu/hour.) *§4-57(a)(1)*

2.0 Preventative maintenance on the boiler shall be performed at regular intervals in accordance with the permittee's maintenance procedures. *§4-57(a)(1)*

3.0 The boiler is subject to and the permittee shall comply with "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units," Title 40 *Code of Federal Regulations* Part 60, Subpart Dc. In accordance with this subpart, a log shall be maintained, on the premises, in which the **quantity of natural gas** that is burned in the boiler during each **calendar month** is recorded. *§4-41, Rule 15.1 (40 CFR 60.40c–60.48c)*

4.0 The boiler is subject to and the permittee shall comply with "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters," Title 40 *Code of Federal Regulations* Part 63, Subpart DDDDD. In accordance with this subpart, a **performance tune-up** of the boiler shall be conducted each **year [no more than thirteen (13) months apart]**. *§4-41, Rule 16.5(c) (40 CFR 63.7480–63.7575)*

5.0 The maximum allowable emissions of particulate matter from the boiler are 0.15 pound/hour. This emission limitation is best available control technology (BACT), as determined by the Bureau Director. *§4-8(e)(2)*

6.0 Visible emissions from the boiler shall not exceed ten (10) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours. This limitation is BACT, as determined by the Bureau Director. *§4-8(e)(2)*

7.0 Testing of the boiler to determine the emissions of particulate matter, nitrogen oxides (NO_X), and carbon monoxide (CO) and to determine the opacity of the emissions may be required by the Bureau Director. If required, these tests shall consist of and be performed in accordance with test methods approved by the U.S. EPA and be performed in accordance with §4-3. *§4-3; §4-8(c)(8); §4-57(c)(1)*

Emission Unit 006 – Clarke Emergency Fire-Suppression Pump Engine

1.0 Only diesel fuel (No. 2 fuel oil) may be burned in the Clarke emergency fire-suppression pump engine. [This engine has an approximate heat input capacity of 1.33×10^6 Btu/hour and a maximum power output of 190 horsepower (141.7 kilowatts).] *permit application*

2.0 The emergency fire-suppression pump engine is subject to and the permittee shall comply with "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines," Title 40 *Code of Federal Regulations* Part 63, Subpart ZZZZ. Full compliance with Subpart ZZZZ shall be demonstrated by meeting all applicable requirements of "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines," Title 40 *Code of Federal Regulations* Part 60, Subpart IIII. *§4-41, Rules 15.1 (40 CFR 60.4201–60.4219) and 16.5(c) [40 CFR 63.6590(c)(6)]*

3.0 The emergency fire-suppression pump engine shall be operated and maintained according to the manufacturer's emission-related instructions. *§4-41, Rule 15.1 [40 CFR 60.4211(a)(1)]*

4.0 **The emergency fire-suppression pump engine shall be operated for no more than 100 hours per calendar year for testing and other specified purposes. There is no time limit on its use in emergency situations.** *§4-41, Rule 15.1 [40 CFR 60.4211(f)]*

5.0 A log shall be maintained, on the premises, in which the date, elapsed time, and purpose (e.g., testing or emergency use) of each operation of the emergency fire-suppression pump engine are recorded. The time of operation shall be read from a **non-resettable hour meter**. *§4-41, Rule 15.1 [40 CFR 60.4209(a) and 60.4214(b)]; §4-57(c)(1)*

6.0 The sulfur content of the diesel fuel that is burned in the emergency fire-suppression pump engine shall not exceed **15 parts per million (0.0015 percent)** by weight. *§4-41, Rule 15.1 [40 CFR 60.4207(b)]; 40 CFR 1090.305(b)*

7.0 The maximum allowable emissions of particulate matter from the emergency fire-suppression pump engine are 0.20 gram per kilowatt-hour. This emission limitation is reasonable and proper, as determined by the Bureau Director. *§4-41, Rule 15.1 [40 CFR 60.4205(c)]; §4-41, Rule 27.3*

8.0 The maximum allowable emissions of nitrogen oxides (NO_X) and volatile organic compounds (VOCs) combined from the emergency fire-suppression pump engine are 4.0 grams per kilowatt-hour. *§4-41, Rule 15.1 [40 CFR 60.4205(c)]*

9.0 The maximum allowable emissions of carbon monoxide (CO) from the emergency fire-suppression pump engine are 3.5 grams per kilowatt-hour. *§4-41, Rule 15.1 [40 CFR 60.4205(c)]*

10.0 Visible emissions from the emergency fire-suppression pump engine shall not exceed fifteen (15) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours. This limitation is reasonable and proper, as determined by the Bureau Director. *§4-41, Rule 27.3*

11.0 Testing of the emergency fire-suppression pump engine to determine the emissions of particulate matter, NO_X, CO, and VOCs and to determine the opacity of the emissions may be required by the Bureau Director. If required, these tests shall consist of and be performed in accordance with test methods approved by the U.S. Environmental Protection Agency and be performed in accordance with §4-3. *§4-3; §4-8(c)(8)*

PERMIT SHIELD

At the request of the responsible official who signed and certified to the Part 70 permit application, compliance with the conditions of this permit shall be deemed compliance with any "applicable requirements," as defined in §4-53, as of the date of permit issuance that (1) are included and specifically identified in this permit, or (2) have been determined in writing in this permit not to be applicable to this permittee as specifically identified. This permit shield does not alter or affect the following:

1.0 The provisions of Title 42 U.S.C. §7603 (emergency orders), including the authority of the Administrator of the U.S. EPA, the Board, or the Bureau Director thereunder; *§4-57(f)(3)(i)*

2.0 The liability of a permittee of a source for any violation of applicable requirements prior to or at the time of permit issuance; *§4-57(f)(3)(ii)*

3.0 The applicable requirements of the acid rain program promulgated under Title IV of the Clean Air Act consistent with Title 42 U.S.C. §7651g(a); *§4-57(f)(3)(iii)*

4.0 The ability of the U.S. EPA to obtain information from a source pursuant to Title 42 U.S.C. §7414, or of the Board or the Bureau Director to obtain information from a source pursuant to the Chattanooga Air Pollution Control Ordinance or any other provision of local, state, or federal law; and *§4-57(f)(3)(iv)*

5.0 The right of any person to damages or other relief on account of injury to persons or property and to maintain any action or other appropriate proceeding therefor; nor does it abridge, limit, impair, create, enlarge, or otherwise affect substantively or procedurally this right. *§4-5(1)*

§4-57(f)